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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/847,634	05/02/2001	Thomas A. Seeman	TIG-200-A	6613

7590 07/09/2003

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EXAMINER
VINCENT, SEAN E

ART UNIT	PAPER NUMBER
1731	

DATE MAILED: 07/09/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/847,634	SEEMAN ET AL.	
	Examiner	Art Unit	
	Sean E Vincent	1731	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 June 2003* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8,13-19,21 and 24-30* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8,13-19,21 and 24-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *02 May 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on June 25, 2003 has been entered.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-8, 13-19, 21 and 24-30 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The originally filed specification and claims do not contain support for "a token amount of butanes or other hydrocarbons containing an acetylenic triple bond ."

Claim Rejections - 35 USC § 103

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Seeman (US 4498918).

7. Seeman taught methyl acetylene / propadiene mixed with methyl acetylene and describes methyl acetylene / propadiene as commercially available in a mixture containing methyl acetylene / propadiene, butane, propylene and propane. It contained 41.73 weight percent of methyl acetylene and propadiene, 6.37 weight percent of butanes, 44.24 weight percent of propylene and 7.66 weight percent of propane. Seeman also describes mixing 90 volume percent methyl acetylene / propadiene with 10 volume percent of a gas containing an acetylenic triple bond which can be allyene (which is also known as methyl acetylene...see col. 3, lines 3-8 and col. 3, line 44 to col. 4, line 30). While Seeman does not teach "90% by volume of a mixture of methylacetylene, propadiene and propylene and 10% by volume of propane", the proportions are so close that one would have expected them to have the same properties, see *Titanium Corp. v. Banner* 227 U.S.P.Q. 773, (Fed. Cir. 1985).

8. The claims are given their broadest reasonable interpretation in light of the "comprising" terminology. Applicant's claims do not exclude other gases such as butanes or hydrocarbons

containing an acetylenic triple bond in the gaseous mixtures claimed. There is no definition of a "token amount" as claimed. Applicant further does not specify the proportions of methylacetylene, propadiene and propylene in the first gas mixture and interpreted broadly this permits an infinite number of variations in the weight percentage compositions from the prior art on which the present claims read. Even if the compositions stated in Seeman were not to fit squarely within applicant's claimed ranges, the weight percent composition possibilities claimed by applicant would overlap the weight percent composition of Seeman. It would have been obvious to a person skilled in the art at the time the invention was made to select the overlapping portions of the ranges disclosed by the reference because overlapping ranges have been held to be a prima facie case of obviousness, see *In re Malagari,* 182 U.S.P.Q. 549.

9. Claims 1-8 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Virey (US Re. 34785).

10. Virey teaches methods of superstoichiometric combustion of hydrocarbons in flames preferably higher than 2500°K for the main purpose of glass mold lubrication (see col. 3, line 34 to col. 4, line 63). Mixtures of propyne and propadiene and further additions of propane are disclosed. It is the position of the examiner that the broad recitation of "90% by volume of a mixture of methylacetylene, propadiene and propylene and 10% by volume of propane" reads on the disclosed hydrocarbon mixtures of Virey. *Note the above discussion: paragraph 8 with regard to the breadth of the claimed gas mixture.*

11. Virey also anticipated other heat sources including plasma in col. 4, lines 22-26. Virey does not teach mold heating, per se. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to expect mold heating to occur in the process of Virey

because the requirement for an oxygen-rich combustion in the flame and a minimum desired temperature suggested that mold heating would have been inherent in the mold lubrication process.

12. Virey does not teach mold heating prior to or during a production run. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to heat molds prior to or during a production run since mold lubrication was done during a production run and Virey taught preferred flame characteristics.

13. Claims 13-19 and 24-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Virey in view of Eagle et al (US 5888266).

14. Virey does not teach changing the gas mixture while maintaining the flame to either inhibit or promote carbon skeleton formation. Eagle et al taught similar processes wherein carbon deposits were taught to be removed by adding methane to a "C-53" gas mixture. With regard to C-53, Eagle et al states "Its composition has varied over the years, but it is presently a blend of methyl acetylene and propadiene (about 45 mole percent), propylene (about 45 mole percent), and butane and propane, (about 10 mole percent)." Eagle et al provides a suggestion to mix methane (natural gas) with C-53 gas to reduce or remove carbon deposits from glass contacting plungers during a heating process using a combustible hydrocarbon gas mixture. The logical conclusion which follows from this is that the degree of carbon deposition varies inversely with the methane proportion in the gas mixture. (see example and col. 4, lines 44-55). *Note the above discussion: paragraph 8 with regard to the breadth of the claimed gas mixture.* It would have been obvious to a person of ordinary skill in the art at the time the invention was made to change the mixture of Virey with natural gas because Eagle et al taught that a carbon

deposit could be removed from a plunger by increasing the methane proportion in a C-53 gas mixture.

15. Virey et al does not disclose venturi mixers. Eagle et al taught similar processes using a venturi mixer (not shown) and a two way Humphrey valve (not shown). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use the venturi mixer of Eagle et al in the process of Virey et al because Eagle et al showed that it was a well known gas mixing means in the art of heating molds with combustible hydrocarbon gases.

Conclusion

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sean E Vincent whose telephone number is 703-305-3607. The examiner can normally be reached on M - F (8:30 - 6:00) Second Monday Off.

17. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven P Griffin can be reached on 703-308-1164. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

18. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0651.

S Vincent
July 8, 2003

Sean E Vincent
Primary Examiner
Art Unit 1731